In the Claims

1-14 (Cancelled)

15. (Currently amended) A method of decreasing the time for hematopoietic reconstitution of a patient following chemotherapy or radiation therapy, comprising:

(a) obtaining a population of cells containing human stem cells from a subject;

(b) enriching for the human stem cells in said population;

(c) exposing the enriched stem cell population, *ex vivo*, to an oligomer antisense to TGF-β, under culture conditions and for a period of time effective to block the effect of TGF-β on replication and/or differentiation of said stem cells;

(d) culturing the antisense oligomer treated stem cells to obtain cultured TGF-β blocking agent-treated stem cells, wherein the viability and differentiation state of said stem cells is maintained for at least 5 days; and

(e) administering said cultured TGF-β blocking agent-treated stem cells to a subject, wherein the time required for *in vivo* reconstitution of at least one hematopoietic lineage is reduced relative to that of a subject who received stem cells not treated with an oligomer antisense to TGF-β.

16. (Currently amended) The method of claim 15, wherein the human stem cells in said enriched stem cell ~~composition~~population are characterized as lacking the expression of lineage markers (lin-), and are either (a) positive for cell surface expression of CD 34 and KDR and negative for cell surface expression of CD38 or (b) positive for cell surface expression of both CD 34 and Thy1.

17. (Original) The method of claim 15, wherein the antisense oligomer is a morpholino oligomer characterized by,

(a) a backbone which is substantially uncharged;

(b) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C;

(c) nuclease resistance; and

(d) the capability for active or facilitated transport into cells.

18. (Currently amended) The method of claim 17, wherein the linkage is [[the]]a phosphorodiamidate linkage represented at Figure 2B, where X=NH_2, Y=O, and Z=O.

19-21 (Cancelled)

22. (Previously presented) The method of claim 17 wherein the antisense oligomer has a length of from 12 to 25 bases.

23. (Previously presented) The method of claim 18 wherein the antisense oligomer has a sequence presented as SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:5.